

IN THE CLAIMS:

Claims 1, 2 and 15-26 have been amended as follows:

1. (Amended) An image reading apparatus comprising: a light source; [,] an input member having an input surface on which [for] an object to be read is placed, the input member comprising a transparent rotary member mounted to undergo rotation in accordance with movement of the object while the object is in contact with the input surface; [of reading, and] [a] light detecting means comprised [composed] of a plurality of photoelectric conversion elements for detecting light scattered or reflected at an interface between the object [of reading] and the input surface; and [, wherein the input member is made from a transparent base member and is constructed of a rotary member rotating in accordance with an amount of relative movement between the object of reading and the image reading apparatus, the apparatus further comprising a whole] image synthesizing means for detecting an amount of rotation of the rotary member and producing an [which detects a rotating amount of a first rotary member by a first light detecting means to detect an amount of relative movement between the object of reading and the image reading apparatus and which obtains a whole] image of the object [of reading] on the basis of [a] partial images [image] obtained by the

[first] light detecting means and the [movement] amount of rotation of the rotary member.

2. (Amended) An image reading apparatus according to claim 1; [,] wherein a repeating pattern of light and dark portions [light-dark pattern] is formed on a surface at one end of the [first] rotary member; [,] and wherein the [first] light detecting means detects light emitted from the [a first] light source and transmitted through the repeating [light-dark] pattern to [thereby] detect the amount of rotation [a rotating amount] of the [first] rotary member.

15. (Amended) An image reading apparatus according to claim 1; wherein [, characterized in that] the [first] light detecting means is disposed at a position where it receives reflected light generated at [from] the interface between the object [of reading] and the input surface according to [and determined by] Snell's law.

16. (Amended) An image reading apparatus according to claim 1; wherein [, characterized in that] the [first] light detecting means is disposed at a position where it receives reflected light generated at [from] the interface between the object [of reading] and the input surface according to [and determined by] Snell's law and scattered light generated at [from] the interface between the input

surface of the first rotary member and the object [of reading].

17. (Amended) An image reading apparatus according to claim 2; wherein [, characterized in that] incident light emitted by the [from the first] light source and incident on the input surface has a plurality of different incidence angle components.

18. (Amended) An image reading apparatus according to claim 1; further comprising [, characterized in that the image reading apparatus has] one of an image formation optical system and a mirror disposed between optical paths of the [first] rotary member and the [first] light detecting means.

19. (Amended) An image reading apparatus according to claim 1; further comprising [, characterized in that the image reading apparatus has] an optical fiber bundle disposed between [the] optical paths of the [first] rotary member and the [first] light detecting means.

20. (Amended) An image reading apparatus according to claim 1; wherein the [, characterized in that the first] rotary member is formed of a glass base material, which is an inorganic base material, or a synthetic resin, which is an organic base material.

21. (Amended) An image reading apparatus according to claim 1; further comprising a dirt prevention layer provided [, characterized in that the image reading apparatus has,] on the input surface of the [first] rotary member for preventing [, a dirt prevention layer adapted to prevent] dirt from adhering to the input surface.

22. (Amended) An image reading apparatus according to claim 1; further comprising [, characterized in that the image apparatus has] a cleaner provided on a surface of the rotary member for removing [adapted to remove] dirt adhering to the surface [of the first rotary member].

23. (Amended) An image reading apparatus according to claim 1; wherein [, characterized in that] the object comprises one of an object having [of reading includes an object of reading having] protrusions and recesses like a fingerprint or light and dark portions like a document [and an object of reading having light and shade like an original].

24. (Amended) An image reading apparatus according to claim 1; wherein rotation of the rotary member causes [, characterized in that the image reading apparatus has a function by which a] one-dimensional position input [is effected in accordance with the rotating amount of the first rotary member].

25. (Amended) An image reading apparatus according to claim 1<sub>i</sub> [,] further comprising a second rotary member mounted to undergo rotation with the rotary member and having a rotation axis different from that of the rotary member; [different from the rotation axis of the first rotary member] and [a] means for detecting an amount of rotation [a rotating amount] of the second rotary member so that [, wherein there is provided a function by which a] two-dimensional position input is effected in accordance with an amount of rotation of the [the rotating amount of the first] rotary member and [that of] the second rotary member.

26. (Amended) An image reading apparatus according to claim 2<sub>i</sub> [,] further comprising a second rotary member mounted to undergo rotation with the rotary member and having [which has] a rotation axis different from that of the [the rotation axis of the first] rotary member; [and] a repeating pattern of light and dark portions provided on the surface of one end portion of the second rotary member; [which a light-dark pattern is formed,] a second light source; [, a] second light detecting means; [,] and [a] rotating amount detecting means for detecting a rotating amount of the second rotary member by detecting light emitted by [from] the second light source and transmitted through the repeating [light-dark] pattern formed on the surface of the second rotary member to

enable [, wherein there is provided a function by which a] two-dimensional position input [is effected] in accordance with the rotating amount of the first rotary member and that of the second rotary member.